THE SOUTH TEXAS REGIONAL COCORAHS NEWSLETTER

NWS Corpus Christi

Spring 2016 Edition

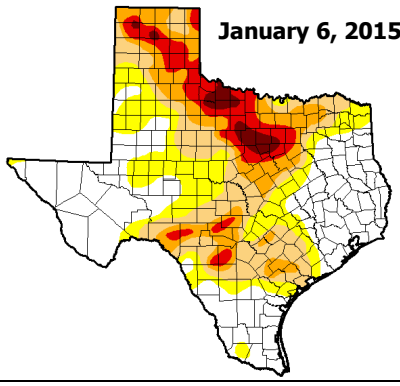
2015: Drought Buster

The year 2015 will be remembered as a truly wet year that finally ended the drought.

Corpus Christi finished the year with 45.02" of rainfall which ranks as the third wettest ever, dating back to 1888. Victoria had its 6th wettest year with 53.68". Laredo, while above normal in rainfall with 25.07", did not rank in the top 20 for wettest years ever.

Just how wet was 2015? Data from the U.S. Drought Monitor shows how beneficial all the rain was. At the beginning of 2015, nearly half of the state was in a moderate drought, with 25% of the state in a severe drought and almost 12% in an extreme drought.

At start of 2016, no part of the state was classified as being in moderate drought or higher. The only areas of Texas that remain abnormally dry.. PAGE 2—>

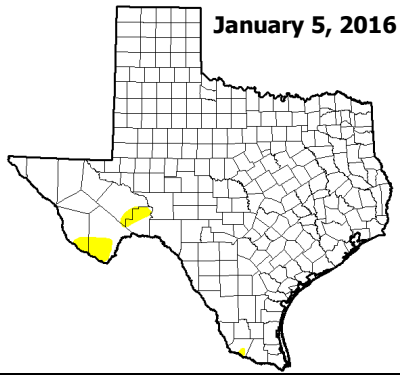


Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	38.95	61.05	41.81	24.07	10.72	2.47
Last Week 12/30/2014	34.37	65.63	44.68	25.73	11.70	3.17
3 Months Ago 10/7/2014	29.64	70.36	49.29	29.49	11.78	2.88
Start of Calendar Year 12/30/2014	34.37	65.63	44.68	25.73	11.70	3.17
Start of Water Year 9/30/2014	28.92	71.08	48.95	29.54	11.26	2.69
One Year Ago 1/7/2014	28.13	71.87	43.89	20.84	5.82	0.79

Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

Maps from the U.S. Drought Monitor showing the areas and percentage of the state under drought conditions on January 6, 2015 (above) and January 5, 2016 (below). After the heavy rains of 2015, much of the state was drought free at the start of 2016.



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	98.31	1.69	0.00	0.00	0.00	0.00
Last Week 12/29/2015	95.48	4.52	0.00	0.00	0.00	0.00
3 Months Ago 10/6/2015	29.70	70.30	48.43	24.66	10.17	0.00
Start of Calendar Year 12/29/2015	95.48	4.52	0.00	0.00	0.00	0.00
Start of Water Year 9/29/2015	34.51	65.49	38.32	17.55	6.27	0.00
One Year Ago 1/6/2015	38.95	61.05	41.81	24.07	10.72	2.47

Intensity:
D0 Abnormally Dry
D1 Moderate Drought
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December Dry Despite El Nino

El Nino began to peak as expected in December, but the result for South Texas was opposite of what many expected…..instead of cool and wet, South Texas was warm and dry.

This year's El Nino is similar to the El Nino of 1997. Like 1997, once the Eastern Pacific tropical season ended, the region had to rely on the exact location and phasing of the sub-tropical jet stream and the mid-latitude jet to increase rain chances. This year, the mid--latitude jet remained well north of our region, negating the ability of the few fronts that approached our region to lift moisture into showers and thunderstorms. The moisture and lift instead went farther east to areas such as Alabama and Georgia. For December, Corpus Christi finished with 0.89" of rain which is well below the normal of 1.83". Victoria received 1.60" (2.31" normal) and Laredo only 0.15" (0.88" normal).

The month of January started off very wet with most locations receiving between 1 and 3 inches of rain during the first three days of the new year.

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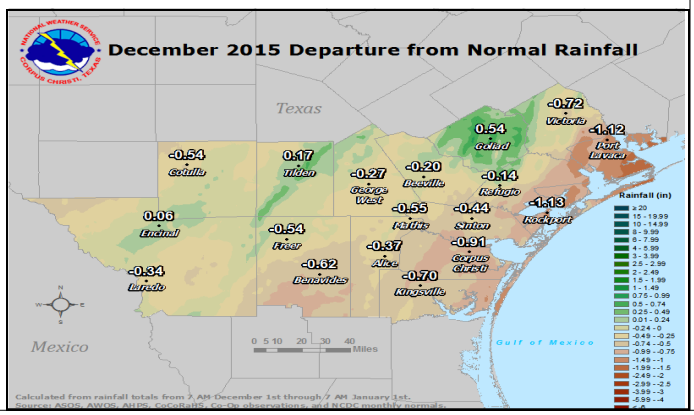

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EL NIÑO—-FROM PAGE 1…. Since the beginning of January however, its been very dry.

The warmer than average water temperatures in the east Pacific may have actually caused the return of the western U.S. high pressure ridge in January and February, keeping California rainfall in check. If the subtropical jet stream fails to "undercut" the ridge later in February and especially March, the potential for average to below average rainfall will continue across Texas and areas of the southeastern U.S.

Outlooks from the Climate Prediction Center continue to forecast above normal rainfall from March through May for all of Texas, with the U. S. Drought Monitor agreeing as they predict no areas of drought for South Texas through the end of May.

The rain potential may depend on the timing of the Madden-Julian Oscillation (MJO) and the Arctic Oscillation (AO). The MJO can inject sufficient moisture for heavy rainfall while the phase of the AO will help determine whether a cooler or warmer air mass will dominate the region during the spring. In March 2010, as El Niño was weakening, there was a negative phase of the AO which led to cold and dry weather; April of that year however was very wet.

2015 DROUGHT BUSTER FROM Page 1——> are parts of the Big Bend Region of west Texas. Parts of Webb and La-Salle County were "abnormally dry" at the end of December, however the nice New Year's rainfall eliminated all dryness entirely. Below is a brief look at some of 2015's heavy rain events.

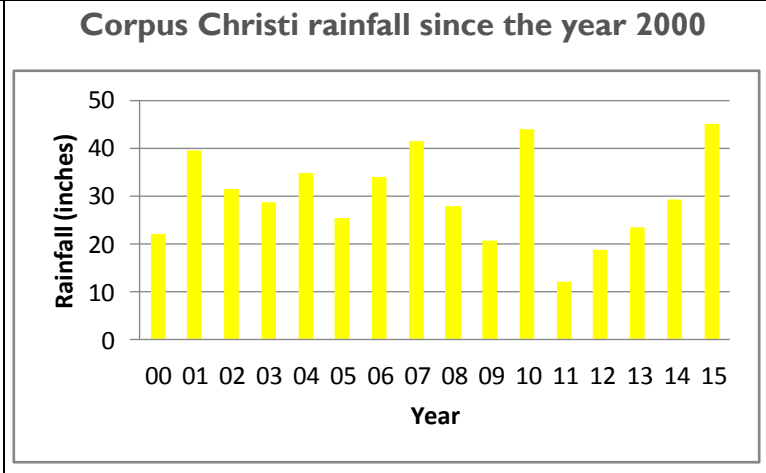
April 16-23rd, 2015: a strong sub-tropical jet stream, combined with several frontal boundaries and upper level disturbances allowed for rainfall to soak the northeastern part of the Coastal Bend. Parts of Goliad and Victoria counties received 5 inches of rain, including 5.21" at Goliad 14.3 NNE and 5.87" at Nursery 0.4 NNW (Victoria County)

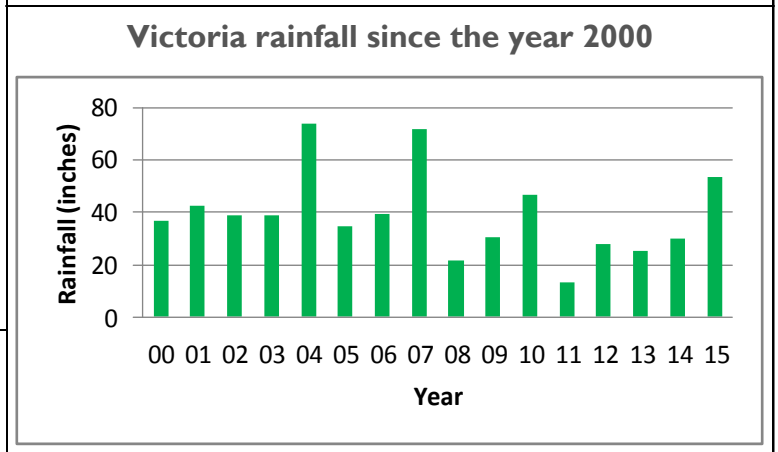
May 11-13th, 2015: A slow moving front, abundant moisture, and upper level disturbances brought several episodes of heavy rain and flooding to the region. Rainfall totals exceeded 10 inches in Flour Bluff as 8 to 10 inches of rain fell in parts of Duval County.

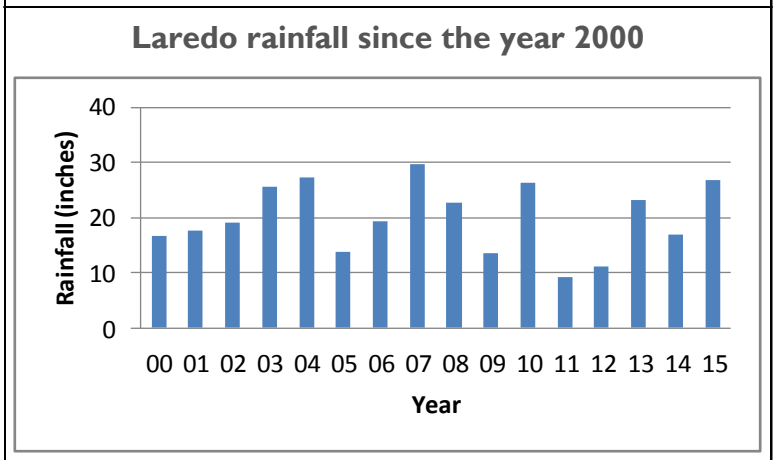
May 15th, 2015: An upper level disturbance helped dump 2 to 5inches of rain across portions of LaSalle, McMullen, Live Oak and Bee Counties. George West 8.0 NE received 5.12" and Artesia Wells 14.0 SE received 6.34".

October 24th, 2015: A cold front, a Pacific hurricane and abundant moisture set up a widespread heavy rain event across all of South Texas. Many locations across Goliad, Victoria and Live Oak Counties received at leat 4 inches of rainfall, including 6.01" at Coleto Creek at Arnold Road (Goliad County); 5.67" at Victoria 12.1 W; 4.27" at Refugio 1.0 NNW and 4.47" at Kingsville.

Right: Flooding in Corpus Christi during the May 11-12th rainfall event.







Early Start to 2016 Hurricane Season

By Christina Barron

For the Northern Atlantic Ocean, Hurricane Season starts on June 1st and lasts through November 30th, as tropical waters warm up under the summer sun. But if water and atmospheric conditions are right, tropical systems can develop at anytime of the year.

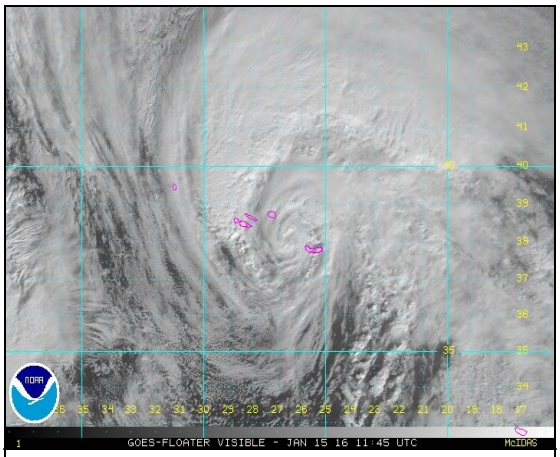
And for 2016, the hurricane season started early. Back on January 7, 2016, the National Hurricane Center (NHC) in Miami, Florida issued Special Tropical Weather Outlooks for a disturbance located about 425 miles west-southwest of Bermuda.

This system started out as only a broad area of showers and thunderstorms, but as the system slowly moved east-southeast toward a more favorable environment, it developed into Subtropical Storm Alex on January 13. When this happened, the NHC began issuing advisories. "This was the first tropical or subtropical storm to form in January since an unnamed system [formed] in 1978. It was also the only 4th known storm to develop in [January] since historical records began in 1851," reported the NHC. Alex quickly strengthened to a Category 1 hurricane by the morning of Thursday, January 14, then peaking with maximum sustained winds of 85mph later that afternoon as the storm aimed straight toward the Azores.

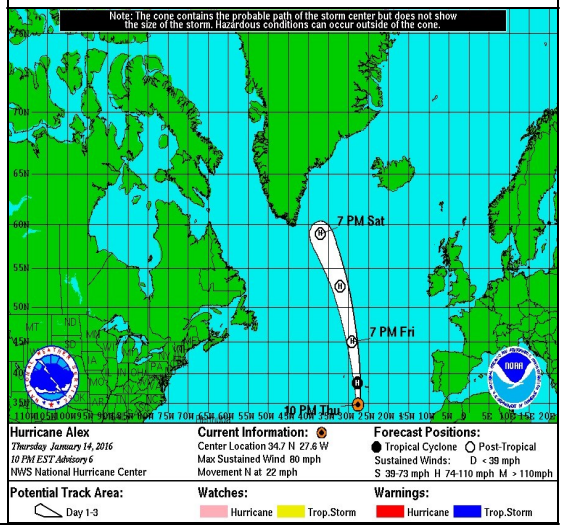
Hurricane Warnings were issued for Faial, Pico, Sao Jorge, Graciosa, and Terceira in the Central Azores, with a Tropical Storm Warning for the island of Sao Miguel and Santa Maria in the eastern Azores as Alex headed their way. Hurricane Alex made landfall across the islands Friday morning on January 15, and quickly weakened into a tropical storm as it moved north over the islands.

Advisories for Alex ended by that afternoon as its tropical characteristics were lost with now post-tropical cyclone Alex forecast to eventually merge with the next upper disturbance and weaken further.

Hurricane Alex was the first hurricane to form in January since 1938. This goes to show, as long as conditions are favorable, tropical storms, even hurricanes, can develop outside the normal season. Mother Nature doesn't use calendars.



Above: visible satellite image of Hurricane Alex on January 15, 2016 as it moves through the Azores Islands with winds of 85mph.
Below: Location of Alex in the eastern Atlantic.



What Makes a Thunderstorm "Severe"?

"What's the difference between a severe thunderstorm and a regular thunderstorm?"

Only one of the two following characteristics is required for a thunderstorm to be considered severe. The storm must either generate hail 1" or larger in diameter OR produce damaging winds (winds 58 mph or greater). Severe thunderstorms can also spawn tornadoes. A tornado is defined as a violently rotating column of air *touching the ground.* A funnel cloud is a violently rotating column of air that does not reach the ground.

Want to know more about severe thunderstorms and help report them? Then attend a Skywarn Storm Spotter training session in your area

Date	Time	Location
March 10th	7:00pm	Orange Grove Fire Department
March 12th	9:30am	First Baptist Church-Laredo
March 17th	6:00pm	Fulton Volunteer Fire Dept Main Station
March 30th	7:30am	TXDoT Offices—Victoria, TX
March 31st	7:00pm	Mt. Olive Lutheran Church-C.Christi

Online training course available at www.meted.ucar.edu

All sessions are free and open to the public..For more information contact John Metz at 361-299-1353 ext 223 or john.metz@noaa.gov

Final 2015 Rainfall Totals

NUECES COUNTY

COOP	NWS-CC Airport	45.02″
TX-NU-4	*Corpus Christi 8.0 WNW*	*43.61″*
TX-NU-7	Corpus Christi 9.0 SSE	40.54″
TX-NU-9	Corpus Christi 6.4 WSW	50.92″
TX-NU-10	Flour Bluff 1.6 SW	50.06″
TX-NU-12	Orange Grove 4.5 SE	44.73″
TX-NU-15	Corpus Christi 9.1 NW	44.88″
TX-NU-38	Corpus Christi 4.8 W	43.50″
TX-NU-4	Corpus Christi 6.5 WSW	51.83″
TX-NU-5	Corpus Christi 6.7 WSW	48.70″
TX-NU-56	Corpus Christ 4.0 S	47.38″
TX-NU-57	Corpus Christi 7.2 WSW	52.80″
TX-NU-61	Corpus Christi 6.9 SE	48.72″

WEBB COUNTY

COOP	Laredo KGNS TV	26.78″
TX-WB-4	Las Tiendas Ranch	26.55″
TX-WB-6	Laredo 2.4 S	20.86″
TX-WB-12	Laredo 1.8 N	24.32″
TX-WB-17	Laredo 5.2 S	21.21″
TX-WB-22	Laredo 23.7 NE	25.16″
TX-WB-23	Freer 29.5 WSW	28.34″
TX-WB-27	Laredo 2.0 NNE	30.21″
TX-WB-44	Laredo 2.8 ENE	26.90″
TX-WB-46	Laredo 4.5 NNW	26.39″
TX-WB-47	Laredo 2.5 N	27.79″

VICTORIA COUNTY

TX-VC-3	Victoria 11.9 SE	48.68″
TX-VC-4	*Victoria 1.3 E*	*56.80″*
TX-VC-8	Victoria 3.7 NNW	46.33″
TX-VC-9	Inez 5.3 SSW	57.32″
TX-VC-17	Victoria 2.1 NNW	55.57″
TX-VC-19	Bloomington 0.5 N	52.87″
TX-VC-20	Victoria 9.7 ESE	53.11″
TX-VC-21	Victoria 14.0 SW	46.64″
TX-VC-22	*Victoria 12.1 W*	*50.57″*
TX-VC-24	Inez 1.8 WNW	45.11″
TX-VC-25	Victoria 9.5 WSW	44.18″
TX-VC-26	Victoria 3.8 NW	50.15″
TX-VC-27	Nursery 0.4 NNW	58.03″
TX-VC-29	Victoria 9.5 SW	48.68″
TX-VC-34	Victoria 6.4 SSW	48.25″
TX-VC-35	Victoria 2.7 NNW	45.88″
TX-VC-37	Inez 1.1 SSE	48.49″
TX-VC-38	Victoria 0.5 NNW	42.84″
TX-VC-39	Victoria 0.4 SE	56.77″
TX-VC-41	Victoria 2.2 NW	48.91″

KLEBERG COUNTY

TX-KL-2	Kingsville 6.5 SSE	41.32″
TX-KL-11	Kingsville 0.6 E	35.22″

SAN PATRICIO COUNTY

TX-SP-8	Mathis 2.6 NW	30.79″
TX-SP-18	Portland 1.3 NW	41.42″

LA SALLE COUNTY

TX-LS-3	Dilley 17.9 ESE	32.92″
TX-LS-4	Artesia Wells 1.1 W	24.57″
TX-LS-5	Cotulla 1.6 NE	27.74″
TX-LS-6	Artesia Wells 14.0 SE	26.77″
TX-LS-9	Cotulla 9.7 SE	29.43″

DUVAL COUNTY

TX-DV-1	Hebbronville 13.6 E	37.83″
TX-DV-7	San Diego 0.7 S	26.20″

McMULLEN COUNTY

TX-MCM-3	Tilden 0.1 E	31.01″
TX-MCM-4	Tilden 16.0 NNW	33.36″
TX-MCM-5	Cross 1.7 NNW	32.88″

BEE COUNTY

TX-BEE-10	Beeville 4.5 NW	51.15″
TX-BEE-17	Normanna 0.5 ENE	45.75″
TX-BEE-18	Beeville 9.0 S	42.11″

ARANSAS COUNTY

TX-AR-3	Rockport 2.1 NNW	61.27″
TX-AR-5	Rockport 0.6 N	57.64″
TX-AR-6	Rockport 3.0 NNW	55.16″
TX-AR-7	Rockport 1.3 WSW	52.37″
TX-AR-8	*Aransas Pass 1.6 NNW*	*53.57″*

JIM WELLS COUNTY

TX-JW-3	Orange Grove 8.1 WNW	37.56″
TX-JW-5	Orange Grove 4.3 SW	41.73″
TX-JW-6	Orange Grove 3.3 NW	28.39″
TX-JW-8	Palito Blanco 1.0 ESE	30.70″

GOLIAD COUNTY

TX-GD-3	*Goliad 2.4 SE*	*49.64″*
TX-GD-4	Goliad 14.5 WNW	55.70″
TX-GD-6	Goliad 0.4 NW	48.29″
TX-GD-8	Goliad 4.1 NW	48.00″
TX-GD-12	Goliad 11.5 N	57.70″
TX-GD-15	Weser 1.9 NW	50.37″
TX-GD-17	Goliad 0.1 S	48.79″
TX-GD-19	Goliad 10.9 NE	39.01″
TX-GD-22	*Victoria 15.0 WSW*	*44.61″*
TX-GD-25	Goliad 14.3 NNE	45.26″
TX-GD-27	Goliad 6.5 WNW	44.97″
TX-GD-28	Goliad 10.5 NE	45.00″

LIVE OAK COUNTY

TX-LO-2	George West 0.1 WSW	33.60″
TX-LO-5	Choke Canyon Dam North	33.59″
TX-LO-9	George West 2.7 NNW	38.50″
TX-LO-11	George West 2.9 E	40.97″
TX-LO-12	George West 8.0 NE	44.73″
TX-LO-14	Sandia 5.1 NNW	36.13″

CALHOUN COUNTY

TX-CLH-1	Seadrift 5.1 E	42.71″
TX-CLH-2	Port Lavaca 0.9 NW	32.59″
TX-CLH-9	Seadrift 0.6 E	45.81″
TX-CLH-14	Port Lavaca 3.3 NNW	47.82
TX-CLH-15	Seadrift 4.9 ENE	46.85″

REFUGIO COUNTY

TX-RF-2	Austwell 0.3 ESE	48.89″
TX-RF-3	Woodsboro 3.6 S	43.39″
TX-RF-8	Refugio 1.0 NNW	47.23″

CoCoRaHS Webinar Schedule

In December 2011 CoCoRaHS kicked off a new and exciting monthly Webinar series called **CoCoRaHS WxTalk** (wx is shorthand for weather). CoCoRaHS WxTalk consists of a series of monthly one-hour interactive Webinars featuring engaging experts in the fields of atmospheric science, climatology and other pertinent disciplines. These easy to follow presentations are live and approximately sixty minutes long. The audience is given the chance to submit questions which the experts answer live on the air.

There are many exciting Webinars on the agenda in the months ahead, so please tell your friends to join us. All WxTalk Webinars are free and most are recorded for later viewing.

Thursday, March 10, 2016 - 12PM CDT

The Day in the life of a TV Meteorologist

Alan Sealls
Chief Meteorologist, WKRG-TV
Mobile, AL

A meteorologist is in your house every day, if you watch TV news. From helping you to plan a weekend to preparing you for dangerous weather, TV meteorologists are loved and sometimes hated. Weather broadcasting is a unique profession because it combines communications, science, performance, community service, computer skills, and teamwork. You might only watch your favorite meteorologist for a few minutes each day. What do most TV meteorologists do with the rest of their work day? Alan Sealls shows and tells, and covers the skills and training needed to become a weather broadcaster. It can be a very rewarding job but it's not for everyone!.

Thursday, April 21, 2016 - 12PM CDT

The Climate and Weather of the Midwestern United States

Mike Timlin
Midwest Regional Climate Center
Champaign, IL

Weather and climate in the Midwest varies throughout the seasons and also spatially across the region. This talk will focus on the typical seasonal conditions for the Midwest. It will also highlight episodic weather experienced in the region ranging from winter storms, blizzards, and ice storms to summer heat, drought, flooding, and severe thunderstorms. The impact of the Great Lakes, with shoreline in six Midwest states, will also be discussed. The Midwest has multiple economic and social sectors that are strongly influenced by weather and climate. One of the most significant sectors is its agriculture, primarily corn and soybeans, though many others such as apples, pumpkins, berries, and livestock also produced in the region. There are numerous large urban areas in the region as well, such as Chicago, Detroit, St. Louis, and Cleveland. Transportation is another major sector, including air, rail, and ground, along with shipping on the Great Lakes and major rivers. This presentation will highlight several of these sectors and discuss the influence of weather and climate.

Thursday, May 5, 2016 - 12PM CDT

The Climate and Weather of the U.S. High Plains

Natalie Umphlett
Interim Director/Regional Climatologist
High Plains Regional Climate Center
Lincoln, NE

National Weather Service
426 Pinson Drive
Corpus Christi, TX 78406

Public Phone Line: (361) 289-0959 ext.1
Recorded Forecasts: (361) 289-1861
E-mail: christina.barron@noaa.gov
Juan.alanis@noaa.gov

National Weather Service Mission Statement:

The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community.

Brief National Weather Service History:

The National Weather Service has its beginnings in the early history of the United States. Weather has always been important to the citizenry of this country, and this was especially true during the 17th and 18th centuries.

The beginning of the National Weather Service we know today started on February 9th, 1870, when President Ulysses S. Grant signed a joint resolution of Congress authorizing the Secretary of War to establish a national weather service.

ON THE WEB!

http://www.weather.gov/corpuschristi